

Guidelines For the Federal Aid At-Grade Highway- Rail Crossing Program (Section 130 Program)

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BACKGROUND

1.0 BACKGROUND

1.1 Introduction

As provided by Title 23, United States Code, Section 130 (23 U.S.C. 130), the Section 130 Program provides federal funds to improve safety at existing at-grade highway-rail crossings. The purpose of Section 130 Program is to reduce the number, severity and potential of hazards to motorists, bicyclists, and pedestrians at highway-rail at-grade crossings.

The Section 130 program is a cooperative effort between the Federal Highway Administration (FHWA), California Department of Transportation (Caltrans), California Public Utilities Commission (Commission), railroad companies and local agencies. FHWA delegated the authority to manage this program to Caltrans in cooperation with the Commission.

1.2 Process Overview

Crossings are selected for inclusion in the state wide funding list based on their hazard potential. There are a number of sources the Commission staff uses to target crossings that present a high hazard potential. These include the Federal Railroad Administration's (FRA) Web Accident Prediction System, the Commission's database to identify crossings with multiple accidents, local agencies, and railroads.

Commission staff reviews each targeted crossing. The review determines which crossings are considered for Section 130 funds. This is based upon such factors as the federal program requirements, eligibility criteria, and if there are improvements which can be made to reduce hazards that are covered by the Section 130 program.

An in depth diagnostic review is conducted for each crossing that will be considered for Section 130 funds. These crossings are then given a priority ranking based on several factors, including the US Department of Transportation (U.S. DOT) Accident Prediction Formula. Due to the finite amount of funding, the final priority list is created based on the highest ranking crossings. Commission staff provides the final priority list to Caltrans. Caltrans develops a funding schedule and solicit plans, specifications, and cost estimates (PS&E) for the scheduled projects. Upon approval of the PS&E, Caltrans will enter into a construction contract agreement with the railroad, and as necessary, the local agency.

Caltrans uses the final priority list to allocate funding in order of priority. Once a project is scheduled for funding, a Commission General Order (GO) 88-B request must be filed and approved by Commission staff before construction may begin.



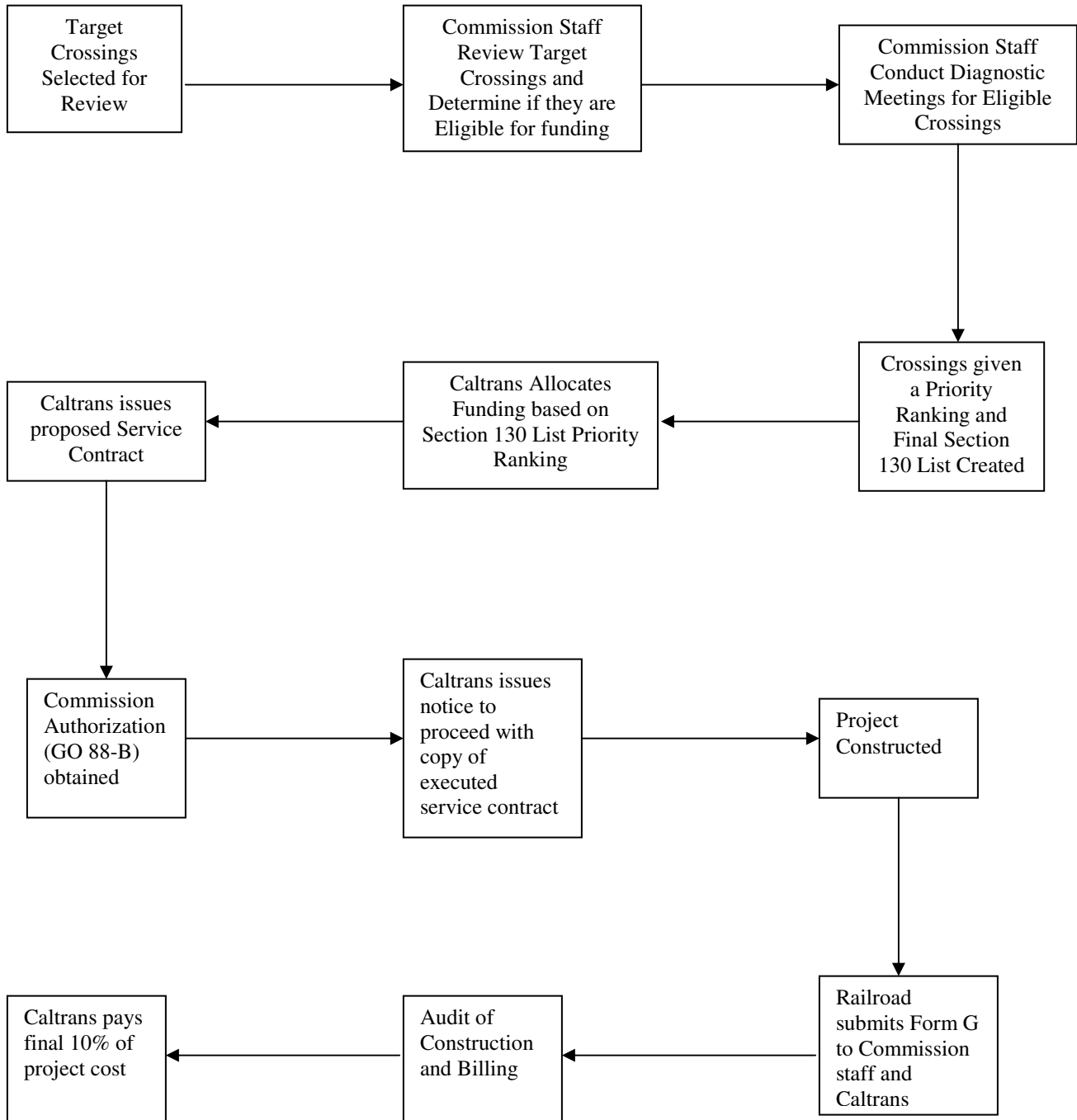
BACKGROUND

All projects with improvements to only warning devices, illumination of the crossing, and signals may be funded 100% under the Section 130 Program. For projects that include safety improvements beyond that scope, the Section 130 Program may fund 90% of the total project cost. The city or the county may be required to pay the remaining 10% of the total cost. The railroad can voluntarily pay the local agency's 10% share.

Thirty days after the completion of the project, the railroad must submit a standard Commission Form G (Report of Changes at Highway Grade Crossing and Separations) to the Commission's Rail Crossing Engineering Section (RCES) staff with a copy to Caltrans.

The overall process for Section 130 Program is illustrated on the next page:

Overall Process For Section 130 Program





CROSSING SELECTION

2.0 CROSSING SELECTION

The first step is determining the crossings to review for possible nomination. Commission staff targets a number of crossings with high hazard potential for review based on several sources. These include FRA's Web Accident Prediction System, the Commission's database to identify crossings with multiple accidents, local agencies, and railroads.

2.1 Crossing Eligibility

Not all crossings and improvements are eligible for financing with Section 130 program funds. Crossings must be at-grade vehicular highway-rail crossings. Crossings solely for the use of pedestrians and/or bicyclists will not be considered. Crossings that are used by light rail vehicles, either solely or in conjunction with freight operation, or crossing state highways will also not be considered.

The Section 130 funding is for safety improvements only. As such it will not be used to fund improvements for the purpose of qualifying a local agency to apply for a "Quiet Zone" with the United States Secretary of Transportation, or for demonstration or pilot projects.

2.2 Corridor Projects

A corridor project is comprised of two or more crossings that are located within the electronic advance warning circuitry limits. Commission staff will not initially nominate corridor projects, as they require a greater commitment from the railroad or local agency. Corridor projects are limited to a maximum coverage of \$1 million, and generally require a larger percentage match in funding by the railroad or local agency. New corridor projects will only be approved by joint agreement with Caltrans, the Commission, and the local agency/railroad.



REVIEW PROCESS

3.0 REVIEW PROCESS

The review process consists of several steps. It starts with the selection of crossings to consider for eligibility based on hazard potential, as previously detailed, and continues with the diagnostic review of the crossings selected for funding consideration, and concludes with the priority list.

3.1 Crossing Review

Commission staff will review each target crossing to determine if it is eligible, and can be improved by items covered under the funding. The staff will consider the current conditions including such factors as the train and vehicle counts, the crossing geometrics, and existing warning devices. If the crossing presents hazards that can be eliminated through the Section 130 program, it will be considered for funding.

3.2 Diagnostic Review of Eligible Crossings

Commission staff conducts a diagnostic review for each crossing considered for funding. This review is a more detailed analysis of the crossing, and includes the participation of the railroad and local agency staff. During the diagnostic review, appropriate safety improvement recommendations are evaluated and determined. The scope of the recommendations is covered in Section 4.

3.3 Priority Ranking

The Commission staff prioritizes eligible crossings based on several factors including, project cost, hazard index (calculated using the U.S. DOT Accident Prediction Formula), diagnostic review findings, passenger trains, school buses, transit buses, pedestrians, bicycles, hazardous material vehicles. Commission staff uses the U.S. DOT Accident Prediction formula, as listed in the Railroad-Highway Grade Crossing Handbook - Second Edition, to calculate the hazard index. An accident history of five years is used in the calculations.



REVIEW PROCESS

3.4 Section 130 Final Priority List

After all eligible crossings are prioritized, the crossings with the greatest need for safety improvements comprise the priority list based upon the expected available funding. Commission staff updates the priority list annually and forwards it to Caltrans. Projects on the priority list will be funded in order of priority. An expected funding year is assigned, although it is subject to change depending on the actual funding available. All projects on the priority list remain on the list until they receive funding or are removed by the Commission staff as no longer eligible or requiring improvement.



ACCEPTABLE SCOPE OF WORK AND IMPROVEMENT

4.0 ACCEPTABLE SCOPE OF WORK AND IMPROVEMENTS

This section describes the scope of work that is considered acceptable for crossing improvements under the Section 130 Program in the State of California.

4.1 Warning Devices

The Section 130 Program will fund the upgrade of warning devices listed in GO 75-C. For example, the existing warning devices may consist of Commission Standard No. 8 (flashing light signals). An upgrade would be to replace those warning devices to Commission Standard No. 9 (flashing light signals with automatic gates), or Commission Standard No. 9A (a Standard No. 9 with additional flashing lights on a cantilevered mast arm). All new warning devices funded are to use 12" LED lenses with 24" hoods.

4.2 Grade Crossing Elimination

Closure: Closure is a condition that occurs when vehicular traffic is removed from conflict with railroad traffic at-grade by closing the road. This includes: removal of warning devices, removal of the surfacing and approaches, construction of barriers and/or fencing, signage, and other measures as deemed necessary during the diagnostic review. The Section 130 program will also match a railroad incentive payment for a closure of up to \$7,500 to a local agency.

Abandonment: Abandonment is a condition that occurs when railroad traffic is removed from conflict with at-grade vehicular traffic through the cessation of all railroad operation or the removal of tracks from the crossing. Abandoned crossings are not eligible to receive Section 130 funds for their removal.

4.3 Other Safety Improvements

There are many safety improvements that can be made in addition to improving the warning devices. These improvements may require a 10% funding match from the local agency for the entire project.

Active Advanced Warning: A train activated warning device placed in advance of the crossing. It may consist of a flashing yellow light on the passive advanced warning sign, or an active sign such as "Prepare to Stop". The specific type of



ACCEPTABLE SCOPE OF WORK AND IMPROVEMENT

active advance warning device will be determined at the field diagnostic meeting.

LED: Lenses with Light Emitting Diodes should be installed with all new warning devices. LED's may be recommended where warning devices do not need to be replaced, only the lenses upgraded. Any relocation of the warning device to meet current clearance requirements as a result of upgrading to LED lenses will be included, but replacement of the warning device will not.

Median: Medians designed to prevent motorists from going around the gates must have a non-mountable curb. The type, width and length of the median vary depending on the specific site conditions and are determined at the field diagnostic meeting. Median landscaping is not funded.

Pre-Emption: Pre-emption interconnects active railroad warning devices with adjacent traffic signals to provide a track clearance phase when a train is approaching.

Track Circuitry: Track circuitry, such as constant time warning devices, or motion sensing devices, may be recommended where appropriate.

Other: There are some items which may be considered on a case-by-case basis such as pull out lanes, pre-signals, traffic lights, three or four quadrant gate systems, crossing illumination, pedestrian gates, flashers and pull gates, passive warning signage, fencing, train activated active message signs and any other item not specifically mentioned in this guideline.

Incidental: There are some items that are included in the projects that do not require specific recommendation. These include such things as minor curb and gutter work, repair to existing sidewalk damaged by placement of a warning device foundations, minor extensions of the sidewalk around the warning devices to meet ADA requirements.

4.4 Items Not Funded

There are a number of items that, as a general practice, will not be funded by the Section 130 program. These include improvement or alteration to the approaches, geometric changes such as the relocation or realignment of roads or railroad tracks, hump removal, event recorders, grade separation, addition of sidewalks, station crossings, surfacing, utility relocation, widening of the roadway for capacity improvements, purchasing of right of way and environmental documentation.



ACCEPTABLE SCOPE OF WORK AND IMPROVEMENT

There may be other improvements that a local agency wishes to implement in conjunction with a Section 130 program and pay for it. Such staged construction work should be coordinated between the railroad and the local agency.

As required by GO 72-B, the railroad is responsible for surfacing within two feet of the tracks, and beyond that the local agency is responsible. The assigned Commission staff area engineer should be contacted to evaluate and assist in the resolution of surfacing issues.



POST LIST PROCESS

5.0 POST LIST PROCESS

Caltrans uses the priority list to schedule projects and allocate funding for each federal fiscal year. The federal fiscal year runs from October through September. Once Caltrans staff receives the priority list they will request cost estimates from the railroad for each project. After Caltrans receives the estimates it allocates funding for projects. The amount of funding available varies from year to year, and not all of the projects on the priority list will be funded in one year.

Caltrans will then issue a proposed service contract for each funded project. When the service contract is signed and returned, Caltrans will issue a notice to proceed. Prior to construction, the railroad or local agency must file a GO 88-B request with the Commission, and receive approval for the crossing modifications.

All GO 88-B authorizations and service contracts require the railroad to file Form G with Commission staff and Caltrans to acknowledge completion of the project. Caltrans will withhold 10% of the total project cost until the Form G is filed with the Commission and Caltrans and the work has been verified.

Please contact Caltrans regarding service contracts, construction approval, funding, payment, and time extensions.